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Kingston

Medical Quarterly

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APRIL, 1902.

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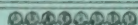
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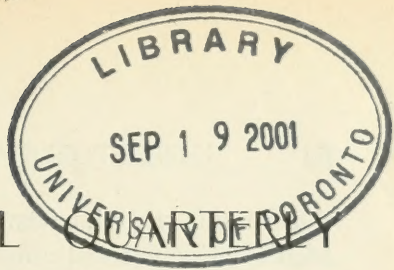
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KINGSTON MEDICAL QUARTERLY

Vo. VI.

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The KINGSTON MEDICAL QUARTERLY is presented to the Medical Profession with the compliments of the Editorial Staff. Contributions will be gladly received from members of the Profession and willingly published. JOHN HERALD, Editor.

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Items of interest or original articles for publication solicited from Members of the profession.

Office of Publication—Kingston, Ontario.

THE ONTARIO MEDICAL ACT.

DURING the last session of the Ontario Legislature there was introduced a Bill to amend the Ontario Medical Act. By this Bill it was proposed to deprive the Universities, the Medical Colleges and the homoeopathic practitioners of representation on the Medical Council of Ontario. Now all who have even a slight knowledge of the history of medical educa-

tion in this Province know that before the formation of the Medical Council a license to practise medicine could be obtained from the Governor in Council on presentation of a great variety of certificates and the payment of a small fee. Besides other certificates the degree of any University or the diploma of any Medical College in the Province practically entitled the holder thereof, on payment of the prescribed fee, to receive his license. Thus there was no uniformity in the qualifications of medical practitioners. The profession generally, and the educational institutions particularly, felt this to be an undesirable condition of affairs. Overtures were made to the various bodies granting certificates which were virtually licenses and the Ontario Medical Council was formed. The various bodies which thus agreed to unite for the sake of securing a common standard of education for all practitioners did so on certain definite and well understood conditions. The Council was to consist of a certain number of members elected by and from the profession, a certain number appointed by the Universities and Colleges, and a certain number elected by and from the homoeopathic practitioners. Until a few years ago this agreement was lived up to in all respects. Then the number of representatives elected by and from the profession was increased and certain rights taken from the representatives of the Educational institutions in the Council. The Universities and Colleges entered no protest against this violation of the spirit of the original agreement. Now comes this new proposal to do away with College representation upon the Council altogether. Against this the Educational institutions naturally protest.

Now follows what to us would be incredible if we did not know the Legislature. It is coolly proposed that at the time of the election of members of the profession to the Council each elector shall express his opinion as to whether or not the educational institutions should be deprived of representation on the Council. That is to say that several bodies enter into a bargain to amalgamate on certain conditions, each of the contracting parties to have well defined rights, and then at a later

date one of the contracting parties says to the Legislature: "We do not think that one or more of the other parties to the agreement should have the privileges originally secured to them by act of Parliament and the granting of which made the bargain possible." The Legislature, carrying out the idea of Responsible Government, which, unfortunately, seems to be fashionable just now, replies "Well, we do not know anything about this matter. We won't assume any responsibility. It is a question for the parties interested to settle among themselves. However, we will fix it so that a vote may be taken and then we will see what the interested parties think of the matter." Now on the surface this looks like a fair proposition. In reality it is most unfair and unjust. The voters are the members of the profession, *i.e.*, they make one of the contracting parties. The other party whose rights it is proposed to take away has no vote. Thus we have the spectacle of one party to a solemn contract confirmed by Act of Parliament going to the Legislature and asking that this agreement be abnegated and the Legislature saying go home and vote on it and if by your votes you say that you wish the agreement broken we will consider the matter. Meanwhile the party whose rights are to be taken away is to have no voice in the question. This may be justice, but it is not British justice. As opposed to this line of argument it may be urged that the Educational institutions will have a voice in the matter, as their Medical Faculties are composed of Medical practitioners, and as such each of them will have a vote. This is true. But consider for a moment what a small fraction of the whole profession the members of the various Medical Faculties make. Even if the Medical Faculties composed the major portion of the whole profession the principle would be wrong. No change should be made in the agreement without the consent of all parties. Consider for a moment an analogous case. In 1867 Ontario and the other Provinces agreed to enter into the Confederation on certain conditions. Each Province on entering the Dominion was guaranteed certain rights. Now suppose that the Provinces other than Ontario were to go to the

Dominion Government and ask that Ontario should be deprived of the rights guaranteed her at the time of Confederation and the Dominion Government should say "Well, we don't wish to assume any responsibility in this matter. Go home and vote on the question. If your votes are in favour of depriving Ontario of her guaranteed rights we will consider the matter." Now in such a case Ontario would be in a much better position than are the Educational institutions, because every voter in Ontario would have a voice to raise against the wrong proposed to be done her, and no Parliament could afford to disregard the voice of the numerically largest factor in the Dominion. Were it proposed to do anything of the nature supposed every voice in Ontario would cry out against it. Yet when it is proposed to follow this very course as regards the numerically weak there are to be found men in the profession and in the Legislature who are ready to hold up their hands and say it is right, it is just.

Notwithstanding the fact that there are in the profession and in the Legislature a few purblind individuals who apparently are dead to all sense of justice and fair play, we are persuaded they will not succeed, but the rights guaranteed to the Educational institutions and to the homoeopathic practitioners will be maintained. Otherwise, these bodies would have no other course to adopt than to demand the restoration of those rights and privileges enjoyed by them previous to the formation of the Council and voluntarily given up by them in the interest of the Medical profession and the general public. This, we feel confident, neither of them wish to do.

DOMINION MEDICAL REGISTRATION.

RECENTLY Dr. Roddick's Bill to establish a Dominion Medical Council with power to issue a Dominion License was before the Select Committee of the House, to which it had been referred. Representatives from Manitoba, from Toronto and from Queen's Universities were present and were given most ample opportunities to discuss the provisions of the Bill. As a result of this conference between the Committee and the representatives of the Universities a few changes were made in the Bill, which, it is hoped, will make it acceptable to all.

Of these changes or additions we shall refer to two only. To Section 10 the following Subsection was added :—"The possession of a Canadian University degree alone, or of a certificate of Provincial registration founded on such possession, obtained subsequent to the passage of this Act, shall not entitle the possessor thereof to be registered under this Act." The reason for this addition is manifest. Provincial Licenses are obtained on different conditions in the different Provinces. In some Provinces a degree from a Provincial University entitles the holder thereof to the Provincial License on payment of the fee in that behalf. In other Provinces all candidates for Provincial License must pass the examinations prescribed by the Provincial Council. It was therefore felt that without the clause above quoted the graduates of some Universities would be placed at a disadvantage as compared with those of other Universities. All present were satisfied that the insertion of the above clause made it clear that the graduates of all Universities would be on an equal footing.

To Section 14 there was added the following paragraph : "And the examinations shall be held only at those centres at which there is a University or College actively engaged in the teaching of Medicine and having hospital facilities of not less than one hundred beds." This was added that there might

not be even the suspicion of unfairness to any teaching body or to the students of any institution.

The QUARTERLY has every reason to be satisfied with the Bill. From the very beginning of the discussion of this question we have contended for increased Provincial representation on the proposed Council based partially on population, for University representation, and for the fixing of the places at which the examinations of the Council should be held. All of our demands have been granted and provision made in the Bill for them.

Whether the Bill will become law or not we cannot say, but if it does it will be in a form that will give satisfaction to all interested parties, and therefore it will be more likely that the Dominion Medical Council will become a permanent institution. The life of the Council depends largely upon the faithfulness with which the provisions of the Act are carried out. At any time in the future if those elected or appointed to the Council should attempt to violate or ignore any of the provisions of the Act so as to do injustice to any Province or any institution, or to any body of students, any of the Provincial Councils may refuse to accept the Dominion License and thus practically make the Act of none effect. We do not fear nor anticipate any such result. With a Council composed as will be the Dominion Medical Council we feel confident that no attempt to do injustice or to show partiality will be made or if made that it could be successful.

SOME OF THE DIAGNOSTIC AND THERAPEUTIC USES OF THE ROENTGEN RAYS.

THE Roentgen ray, as a diagnostic agent, is no longer an experiment. Its growth has been phenomenal. It came up through the stage of criticism with unprecedented rapidity, receiving few scars and for these it is therapeutically the richer. That too much has been claimed for the ray in certain quarters seems tolerably certain, but it is equally true that inexperience and inferior apparatus have not infrequently discounted its true value. Its real enemies at the present moment are its rash, inexperienced and self-seeking advocates.

Some physicians would limit its use to the detection of foreign bodies and the recognition of certain fractures and dislocations, but these are the limitations of its natal day; as well might we limit the use of the microscope to the recognition of the grosser tissue-elements.

With a view to demonstrating its wider range of usefulness, I have collected from my notes covering a period of upwards of six years the necessary data for this paper.

Foreign bodies.—The following have been located in various parts of the body: bullets, shot, needles, coins, slate pencils, pieces of glass, iron and copper.

The following case of bullet-wound is interesting as showing the tolerance of certain portions of the brain:—

A. L., aged 35, admitted to the hospital Nov. 5th, 1898. Service of Dr. Garrett. Referred for examination by Dr. Emery, Gananoque.

The bullet, a 32, entered the external meatus of the right ear and lodged, as the X-rays showed, in the right frontal lobe two centimetres from the angle of junction of the horizontal and vertical portions of the frontal bone and directly over the centre of the right orbit. Dr. Emery dressed the external wound a few minutes after the accident. No symptoms fol-

lowed. No attempt was made at removal. The patient is now, three and a half years after the accident, carrying on a successful business in a neighboring town.

Fractures.—The list comprises the following :—fractures of the zygoma, inferior maxilla, skull, radius, ulna, metacarpals, fingers, humerus, clavicle, coracoid, ribs, femur, patella, tibia, fibula and metatarsals.

From my limited observations the following conclusions are drawn, first, that fractures of the metacarpals and metatarsals and of the lower end of the radius and the ulna are the most frequently overlooked, and, secondly, that no absolute rule can be laid down with regard to the line of fracture, even when the casual factors are similar and seat of fracture the same.

P. S. J., aged 34, examined Oct. 7th, 1898, farm laborer. Three months previously, when harvesting grain, the load upset, throwing him down an embankment a distance of 20 feet. Diagnosis—"severe sprain of instep." The foot is still swollen and passive movements of the toes are difficult and painful. Examination by the ray shows a fracture of the second metatarsal bone with incomplete adaptation and excessive callus formation. The significance of the popular expression "a bad sprain is worse than a break" is apparent.

With regard to the line of fracture, generally speaking, fractures of the long bones about the middle of the shaft were transverse, while those at either extremity were more or less oblique. The Colles' cases were exceptions. In all but four of these the line of fracture was transverse, in these it was transverse and longitudinal. The styloid process of the ulna was fractured in 28 per cent. of my Colles' cases.

Dislocations.—The list is somewhat limited and comprises only dislocations of the shoulder, elbow, thumb, patella and wrist. The only one of especial interest occurred in the practice of the late Dr. Christie, of Seeley's Bay. The patient gave a history of having fallen from a high vehicle. When first examined, some hours after the accident, the wrist was greatly swollen and a provisional diagnosis of Colles' fracture was

made and the patient asked to return in a few days. One week later the case was referred to me for X-ray examination, when the following condition was found:—fracture of the styloid process of the ulna, backward displacement of the ulna, the head of the bone resting on the pisiform, radius not fractured but displaced outwards, articulating only with the scaphoid.

Diseases of bone.—This series include 312 cases, divided as follows:—Tuberculosis, 267; Subperiosteal abscess, 9; rickets, 10; bony ankylosis, 7; exostosis, 6; loose cartilages, 6; syphilitic dactylitis, 4; osteo-sarcoma, 1, chondro-sarcoma, 2. The order of frequency of tuberculous invasion of joints was as follows: knee, hip, wrist, elbow, calcaneo-astragaloid, ankle.

The hip joint, owing to the density of the muscular structures, offers considerable difficulty, and a correct diagnosis can only be made by one experienced in interpreting the finer shadings of a negative. Except in advanced cases, I have not been able to diagnose the condition with the fluoroscope alone. In fact, in all diseases of bone, one or more skiagrams should be taken in order that the negative may be carefully studied. In doubtful cases stereoscopic skiagraphy as suggested by Prof. Girdwood, Montreal, should be resorted to. The limb is skia-graphed from two points and the pictures carefully mounted and examined in the reflecting stereoscope. There is perhaps no better method of studying a fracture or of localizing a foreign body. Differences of opinion may exist regarding the utility of the ray in the diagnosis of tuberculous processes in the lung, but in tuberculosis of bone the ray so far outstrips all other diagnostic means at our disposal that its routine use cannot be too strongly urged. My joint cases have impressed upon me the importance to the patient of an early diagnosis. With appropriate treatment the results have been most gratifying.

The frequency with which the tuberculous process begins in the calcaneo-astragaloid articulation, extending subsequently to the ankle-joint, must be specially referred to. My series shows tuberculosis of this joint to have been more frequent

than that of the ankle-joint, and my observations would lead me to believe that the tuberculous process in ankle-joint cases not infrequently finds its starting point in the calcaneo-astragaloid articulation.

T. M., aged 26, Dr. Northmore, Bath. Patient gave a history of a sprain of the ankle in alighting from a rig. Pain disappeared in a few days. Ankle remained weak, however. A mis-step would cause return of pain. About six weeks after the first "sprain" the pain and swelling about the ankle-joint were marked, the skin dark and shiny, and he consulted his physician, who suspected tuberculosis and referred him to me for X-ray examination.

A skiagram showed tuberculosis of the calcaneo-astragaloid articulation, both bones being affected, but chiefly the astragalus. In three months under appropriate treatment he was able to bear his weight on the foot, and he has since (18 months) remained well.

Miss G., aged 16, Oct., 1900, Dr. Emery, Gananoque. No history of injury. For past three months she has complained of pain in the instep worse in the evening and especially at the menstrual epochs. Foot and ankle much swollen and very tender. In this case the os calcis was not involved, but the process had extended rather more than half way through the astragalus towards the ankle-joint. Dr. Emery began treatment at once, and reports (Apl. 28th, 1902,) patient perfectly well.

Sub-periosteal abscess.—Frank K., age 11, admitted to hospital Oct. 2nd, 1897. Service of Dr. Anglin. History of injury: Complained of pain in the lower part of the thigh, no swelling or discoloration; tenderness on deep pressure. Skiagram showed a large sub-periosteal abscess at the junction of the middle and lower third of the shaft of the femur.

Rickets.—The fluoroscope will at once show the deformity, but a plate should be taken in order to accurately estimate the

degree of lessened density of the bones. The following comparison of healthy and rachitic bones explains the diminished density* :—

	Normal bones.			Rachite bones.	
	Tibia.	Ulna.	Femur.	Tibia.	Humerus.
Inorganic matter.	62.3	64	20.6	33.6	18.8
Organic matter	34.68	35.9	79.4	66.3	81
Calcium phosphate...	57	56	14.7	26.9)	15.6
Magnesium	1	1	.08	.08)	
Calcium carbonate....	6	6	3	4.8	2.66
Soluble salt7	1.6	1.6	1	1
Ossein	33	34.9	72	60)	81
Fats.....	.8	1	7	6)	

Loose Cartilages.—These cast a shadow varying in density between that of bone and muscle. Should two negatives, taken at right angles, fail to locate the loose cartilage, the joint should be freely manipulated and again skiagraphed.

Bony Ankylosis.—Osseous ankylosis can be readily diagnosed with the fluoroscope.

Mrs. A., aged 35. Referred for examination by Dr. Carscallen, Enterprise. Pain in left tarsus began at age of 14 and had continued at intervals ever since. At times the foot was greatly swollen. This subsided under rest and treatment. The pain has always been worse at the menstrual periods. The skiagram showed bony ankylosis of the tarso-metatarsal articulation.

Exostosis.—The list comprises but six cases, three on the metatarsal bones, two on the metacarpals, and one on the tibia. To these may be added seven firm tumors in which the bone was only indirectly affected, these were probably syphilitic. They disappeared under the prolonged use of the iodides.

Calculi.—The recognition of these in the kidney, ureter or bladder depends to a very great extent on the amount of inorganic salts contained in them. I have so far utterly failed to locate uric acid calculi. The oxalates offer less difficulty. Calculi, composed of uric acid and oxalates, or uric acid and phosphates, can be skiagraphed, the density of the shadow being proportionate to the amount of inorganic matter in the calculi. The X-ray negative is much more satisfactory than fluorescent screen in making examinations for calculi. Unless the stones are very large and composed of oxalate or phosphate of calcium the screen is valueless. Gall-stones are recognized with great difficulty, especially in stout persons. Beck, at a meeting of the New York Academy of Medicine, January, 1901, showed several good skiagrams of gall-stones. As apparatus and technique improve we may hope for better results in this direction.

INTERNAL ORGANS.

Heart.—The outlines of the heart stand out prominently on the fluorescent screen. This is especially true of the left ventricle. The pulsations can be counted even by the most inexperienced. We have no other means of acquiring so accurate information of the size and location of the heart as that given by the ray. Every physician has experienced, for example, the difficulty in distinguishing between dilatation of the heart and pericarditis with effusion. A diagnosis without the ray is notoriously uncertain, with it the task is comparatively easy. In pericardial effusion the regular wavy outline of the left ventricle, with each systole, is no longer evident, its place having been usurped by a bulging mass, the appearance of which is at once diagnostic. Among other displacements, readily recognized, those the result of pleuritic adhesions, pneumothorax, pulmonary fibrosis, etc., may be mentioned. The degree of displacement of the heart, following pleuritic effusion, cannot be accurately determined by percussion, since the heart may be pushed into the body of an emphysematous lung and the dull area therefore much lessened.

Displacement simulating dextrocardia.—In the autumn of 1897 a negro masqueraded among the physicians of this section, bearing in his hand from a physician of a neighboring province a diagnosis of dextrocardia. He talked glibly of stethoscopes, auscultation, etc., and incidentally mentioned that a small fee of half a dollar usually accompanied the privilege of examination. It was a rare chance and few physicians refused to contribute to his depleted treasury the amount named. The fluoroscope showed only a slightly enlarged heart, drawn somewhat to the right side, probably as a result of pleuritic adhesions.

Chronic Endocarditis.—A. B., aged 57, laborer, rheumatism at 19. Physical examination of the chest May 4th, 1897, revealed the presence of a mitral systolic murmur with increased area of cardiac dulness. Examination of the heart, with the ray, showed a transverse diameter of 13.8 centimetres. (About 11.5 is the normal for an adult male). On July 16th, after two days of rather laborious work, the lower portions of both lungs showed considerable cloudiness. Rest in bed, no drugs other than a purgative. On the evening of the 19th the lungs were clear and he resumed work the following morning. On August 14th the lungs were again examined with the ray and fully half the lung on either side showed cloudiness. As the patient was not complaining of shortness of breath, etc., nothing was said to him, and he continued his work. At this time dulness could not be elicited on percussion. On the evening of Labor day, after considerable walking, the ankles were swollen and the shadows on the screen of the oedematous portions of the lungs were much denser. The condition gradually grew worse until on October 7th the limbs were swollen to the knees and the lungs, with the exception of their apices, were scarcely permeable to the rays. The movements of the diaphragm could not be made out. Rest in bed, purgatives, digitalis and an occasional hypodermic of morphia restored the balance.

Frequent examinations of this patient, extending over a period of two years, showed, first, that the volume of the

heart in valvular disease varies much, and, secondly, that the earliest evidences of a broken compensation were to be found in the lungs, especially in their most dependent portions.

Thoracic Aneurism. The shadows on the screen are very varied, depending on the size and location of the aneurism. An accurate diagnosis of a small aneurism is always difficult and sometimes impossible by our ordinary methods. A careful X-ray examination will show a well defined dark area above the heart, whose pulsations are synchronous with those of the heart itself. If the sac is filled with clot there may be no pulsation, clotted blood, however, casts a shadow much darker than normal blood. The aneurism if large will throw a shadow on both sides of the sternum, if small and on the descending arch on the left side, and if small and on the ascending aorta on the right of the sternum.

Lungs and Pleuræ.—In some cases the X-ray may add nothing to the information obtained by our ordinary methods; but the ability to make the usual physical examination of the chest and then to look at the problem by means of an X-ray examination, and thus consider the question anew, confirming or disproving the first opinion, is a gain that no physician, who is familiar with diseases of the chest, or who has taken the trouble to acquaint himself with the possibilities of the ray, will for a moment question.

Pleuritic effusions, like pericardial effusions, cast a dark shadow on the screen or plate and therefore with the lung give us the necessary contrasts. This applies equally to the sero-fibrinous and purulent exudates. Movement of the patient shows a disturbance of the surface of the fluid except of course in encysted pleuritis.

In pneumonia the areas of consolidation can be accurately determined. The intensity of the shadow depends on the degree of consolidation. In some cases the absorption of rays is complete. The excursion of the diaphragm is limited on the affected side, owing either to hepatization or to pleuritic adhesions.

Central pneumonias, that offer so many obstacles to a correct diagnosis by our ordinary methods, are easily recognized by an X-ray examination. In 72 per cent. of my pneumonias the pneumonic process began in that portion of the right lung lying between the second and fourth ribs, involving later the lower portion of the lung, rarely the upper.

Stomach.—I have not found the ray of great value in the diagnosis of gastric affections. The size of the cavity can be estimated by using a metal-tipped stomach tube. Transluminatation of the body with the tube *in situ* will afford fairly accurate information of the presence or absence of dilatation. It is of much greater value than Einhorn's stomach-lamp in the diagnosis of gastropotosis. I have not used Turck's gyromele. Where there is decided objection to the passage of the tube an ounce of pure subnitrate of bismuth, taken with a little bread and milk, answers very well. This salt is fairly opaque to the rays.

Liver.—The upper portion of the liver can be determined with certainty on the fluorescent screen, the lower border, however, except in children, requires a plate; enlargement, atrophy or displacement can be readily diagnosed.

Spleen.—In children and young adults the spleen can be seen with the fluoroscope, ascending and descending with the diaphragm. With each respiration it has the appearance of turning a somersault owing to the greater degree of movement of its anterior border.

Kidneys.—Both kidneys can be skiagraphed, the left more easily than the right, owing to the relation of the liver to the latter. In the examination of the abdominal viscera it is necessary for the patient to fast and for the bowels to be thoroughly moved.

PULMONARY TUBERCULOSIS.

The number of recoveries being about inversely as the duration of the disease, too much stress cannot be laid upon the importance of an early diagnosis. The outlook is decidedly more promising before there is either cough or definite

physical signs. When tubercle bacilli are found in an abundance of sputum the case is not one of early tuberculosis. To keep the patient under observation until suspicion develops into apprehension, and apprehension into certainty, is a reproach on our diagnostic acumen. The earliest beginning of a tubercle in the lung can not be detected by any known method; the Roentgen rays, however, will pick out a tuberculous focus, in many cases, before either the stethoscope or microscope. To infer, however, that the rays can diagnose tubercle off-hand would be a mistake. As with the stethoscope, so with the ray, we must carefully consider each individual case. In our examination with the ray we look first to the diaphragm. Physiologists tell us this muscle becomes flatter with each inspiration. This is a mistake. It plunges up and down piston-like, the curve remaining practically unaltered. Even when the disease is confined to an apex, the movement of the diaphragm on the affected side is much less than on the non-affected. Lessened excursion of the diaphragm, together with a cloudy or flocculent shadow of an apex or other portion of lung on the screen, should excite our gravest suspicions. A careful consideration of the case, using all the other means at our disposal, will usually clear up the diagnosis. One other point—the diagnosis of a cavity. That the X-ray can detect a cavity in the lung is a fact beyond question; that auscultation frequently diagnoses a cavity, which the rays show has no existence, is also a fact. This I have verified in the *post mortem* room.

THERAPEUTIC USES.

Therapeutically the X-rays are in the early stage of development. That certain skin lesions should be relieved by the rays without causing either pain or inconvenience to the patient is surely marvellous, but it is nevertheless true. Just how they act is not known. It was believed that the inflammatory process set up—the X-ray dermatitis—was sufficient to injure the life conditions of micro-organisms, and therefore their continuance, but this had to be modified in view of the

fact that healing can take place without any evidence of preliminary dermatitis.

In 1898* I called attention to the fact that certain garden seeds germinated in three days, under daily exposures of an hour to the rays, while those not exposed but otherwise similarly treated germinated on the sixth day.

One of two theories, it seems to me, must be accepted, at least tentatively, either that the rays act directly as a bactericide under certain conditions, or that they act indirectly as such by increasing the vitality of the tissues sufficiently to overcome the bacterial agency. Investigations along this line have shown that the rays have little bactericidal effect when applied to the culture in the tube, but we must not rely too implicitly on such evidence. The conditions differ. In the one case we have the ray alone, in the other the ray plus the *vis medicatrix naturee*. Further investigations, however, are necessary.

Among the list of diseases said to be amenable to X-ray treatment, I can speak with some confidence regarding the following:—lupus vulgaris, rodent ulcer, cancer of the lip, psoriasis and cancer of the breast.

I have under treatment a case of secondary carcinoma of the breast, the primary growth having been removed some months ago and diagnosis verified. Before treatment was begun the tumor was about the size of a tangerine orange with an ulcerating surface covered easily by a ten cent piece. At present, after twenty-one treatments, the pain is gone, the ulcer healed, and the tumor reduced one half in size. Many of the enlarged axillary glands are now not palpable. Will the tumor entirely disappear? It seems probable. Will it return? Time will tell.

Cancer of the Lip.—A. S., age 36. Family history: mother died from cancer of the breast. Seven months ago a "cold sore" appeared on the lower lip. Scales formed which loosened and fell off, or were picked off, every few weeks.

*Kingston Medical Quarterly.

During the past month the growth has increased more rapidly and he now complains of pain. The indurated mass is about the size of a plum, the raw surface 1.5 centimetres in diameter. Enlarged glands can be felt below and a little to the left of the symphysis. Treatment was begun on Feb. 17th, and continued on alternate days until March 25th, when all induration had disappeared and except for a slight pallor that portion was as smooth and natural as the balance of the lip. Of the diagnosis there seems little doubt. Permission to remove a small section for microscopical examination could not be obtained.

Rodent Ulcer.—Mrs. R., age 67. History of injury to forehead in 1873. A few years afterwards the skin broke and the wound has been discharging and gradually extending its boundaries in a circular direction ever since. On January 10th the affected area extended from the glabella backwards in the median line 12.5 centimetres, the transverse diameter being 10.2 centimetres. The bone corresponding to this area is entirely gone with the exception of an exposed strip 1 centimetre in width and 5 centimetres in length, along the left border. The brain can be seen pulsating through the meninges and the longitudinal fissure can be made out. Treatment was begun Jan. 10th with a soft tube at a distance of eight inches, the body and the rest of the head being protected with sheet-lead. The offensive odor and the pain, except that due to the exposed bone, was entirely gone Jan. 20th. On March 29th the ulcer was entirely healed save a narrow strip along the edge of the protruding bone. The late Dr. Saunders injected Koch's tuberculin in 1891, but without effect. Patient is still under treatment.

CAUTION!

One word of caution in conclusion. As a therapeutic agent the outlook is hopeful, but let us "make haste slowly." As a diagnostic agent the great value of the ray cannot be questioned, but we must not lose sight of the fact that it is a powerful weapon, a double-edged sword. For the present, at least, let us consider it a valuable adjunct to other means of

diagnosis rather than a keen competitor for supremacy. We must not abandon the old method of drawing conclusions by a process of inductive reasoning after a thorough and searching examination. To do so would make us mere automatons.

There are three things that should never be placed in the hands of the patient: the hypodermic syringe, the thermometer and the X-ray photograph. The abuse of the first is so general that it must ere long engage the attention of the profession, while every physician has witnessed the miserable wrecks made of certain neurotic patients as a result of the ignorant interpretations attached to slight daily variations in temperature. The same may be said of the X-ray photograph. The interpretation of many plates is difficult and long experience is necessary to guarantee safe conclusions. There are many pitfalls into which the unwary may drop. Much discomfort may be caused the patient, and annoyance the surgeon, from the realization by the patient that the union of his fractured bone is not a piece of cabinet work, notwithstanding the fact that that union is sound and function perfect. The conclusion naturally follows that the Roentgen rays must be in the hands of physicians and surgeons, not laymen, and that they must learn to interpret their results just as they have learned auscultation and percussion; and, finally, it is only from those whose experience and careful study of the subject warrant their speaking with authority that an X-ray diagnosis should be accepted. In this way only will the public be benefited and the profession protected.

JAS. THIRD.

NOTES ON SURGICAL CASES.

ENCYSTED HYDROCELE OF THE CORD.

DURING the past six months in my surgical clinic five cases of hydrocele of the cord have presented for treatment. This fact in itself is worthy of mention, as for several years preceding not a single case of the kind had come under observation. The ages of the patients varied from 19 to 83 years.

In all the cases there was a history of traumatism in some form as an exciting cause, and three of the patients had been aware of the existing condition for several years. One had been tapped three times in twenty years.

In the case of the man of eighty-three the condition was complicated by a large scrotal hernia, and he was brought to the hospital for treatment for retention of urine. The youth of nineteen had been operated upon two years ago for varicocele.

The operative treatment was similar in each case, viz.: A free incision through the scrotal tissues with exposure of the cyst, which was then emptied of its contained fluid and the cyst wall cut away all around as close to the spermatic cord as possible. The skin wound was then closed with interrupted suture, leaving a small opening for drainage at the most dependent part until the first dressing in 24 or 48 hours.

The diagnosis of the condition was made in each case before operation. The cysts did not in any case communicate either with the tunica vaginalis testis nor with the peritoneal cavity. The quantity of fluid varied from a few ounces to a pint and a half.

In the diagnosis the history of the case was helpful, as the patient stated that the swelling was first noticed at the *upper* part of the scrotum. Upward pressure upon the tumor would cause increased swelling in the inguinal region, with no evidence of reduction nor decrease in the extent of the tumor as a whole. No expansile impulse in the swelling could be ob-

tained during the act of coughing. The tissues at the lower part of the scrotum were not distended, and the testicle could be felt in the usual situation, and, lastly, the test for translucency was applied in some of the cases and shewed the serous character of the contained fluid. The outline of the tumors was globular, and owing to the great degree of tension it was difficult to obtain the sense of fluctuation.

STRICTURE OF THE URETHRA.

T. D., æt 47, was referred to me by his physician in December last for impermeable stricture of the urethra.

The origin of the present condition began in a urethritis contracted about twenty years ago, and the difficulty had been steadily increasing of late years until the urine came only in drops. No attempt at any time had been made to pass an instrument per urethram. On examination of the perineum an elongated fibrous ridge could be felt in the line of the urethra, and digital exploration per rectum confirmed this and also showed that the prostate was of normal size.

The patient was carefully prepared for examination and a small sized Otis' metallic bougie passed which met with firm resistance about an inch and a half in front of the triangular ligament. Then a number of sounds and bougies (metal and gum elastic) and whalebone filiform bougies were tried, both without and with anæsthesia of the patient, but all failed to effect an entrance into the bladder and could not even be made to enter the stricture. It was evident we had to deal with an impassable organic structure, and that the only method of treatment was to do a perineal section, *i.e.*, external urethrotomy without a guide.

The patient was placed in the lithotomy position with the pelvis a little elevated and an ordinary grooved lithotomy staff passed through the meatus down to the stricture. This staff was given into the hands of an assistant, with instructions to let the convexity of the staff press gently against the perineum. A free incision was then made into the perineal tissues, keeping strictly to the middle line until the urethra was reached

and opened just in front of the stricture. With a fully curved needle a silk ligature was passed through the divided healthy urethra, one on each side, so as to form traction loops. The staff was then withdrawn and steady traction being made on these loops the stricture was divided with the scalpel throughout its length until a director could enter freely into the proximal urethra and onwards to the bladder, the entrance being made evident by a free flow of urine. A catheter was then introduced through the perineal wound and the bladder freely douched with boracic lotion and finally a rubber drainage tube inserted and stitched into the perineal wound. This tube with one or two perforations in the sides was entered just within the bladder and projected about three-quarters of an inch from the perineum, its open mouth being there closed by a funis clamp. The perineal wound was then closed by three or four interrupted sutures of silk worm gut, and the usual dressings kept in place by a T bandage.

In the after-treatment the clamp was released about every three hours and the urine allowed to flow, and once daily the bladder was irrigated through the tube. After five days the rubber tube was removed and a No. 11 (English) silver catheter was introduced without difficulty through the meatus into the bladder and fastened in position by means of tapes attached to the penis by strips of adhesive plaster. This catheter was retained for five days and the flow of urine controlled by a silver plug, although there was some leakage through the perineum. After the removal of the catheter the patient urinated for a time both through the meatus and the perineum, and every second day a graduated 9 to 12 Lister's bougie was passed per meatus. The leakage through the perineum gradually ceased, until at the end of three weeks the urine passed entirely in the natural manner, and the patient returned home at the end of four weeks with instructions to have a sound passed at least every fortnight for a time. A recent letter from his physician states that the patient is in perfect health, has no trouble in urinating, and that the sound passes readily and without discomfort.

Another case of stricture in a younger man operated on a few weeks later has also resulted favorably, but in his case the operation was greatly facilitated by the use of Syme's staff, an instrument which that eminent surgeon invented as a guide. It consists of a sound, the main portion of which is in size No. 10 English, but the terminal four inches is reduced to size No. 2 English, and is deeply grooved on its convexity. At the junction of the two portions is a distinct shoulder and the groove is continued for over half an inch into the larger portion of the staff.

The staff is passed cautiously with one finger in the rectum as a guide until the shoulder rests upon the face of the stricture. The point of the knife having found the groove is pushed onwards, dividing the stricture with certainty and safety.

As to choice of operation in cases of stricture of the urethra, I prefer when at all possible gradual dilatation, using Lister's graduated bulbous pointed bougies as the simplest and safest operation. For tight strictures in the penile portion of the urethra internal urethrotomy is indicated, using for this operation a Maisonneuve or other form of urethrotome, but if the stricture is in the membranous portion of the urethra external urethrotomy is called for as being the safer operation and giving good results, especially as efficient drainage and irrigation of the bladder is provided for to the great relief of the accompanying cystitis.

As in the case here quoted impassable strictures leave no choice, but must be dealt with by external urethrotomy.

W. G. ANGLIN.

QUEEN'S MEDICAL CONVOCATION.

QUEEN'S Medical Convocation ceremonies took place Wednesday afternoon, April 9th, at four o'clock, in Convocation Hall, which was filled to the doors, despite the most unfavorable weather. Chancellor Sir Sandford Fleming presided, and on the platform with him were the Rev. Principal Grant and members of the various faculties. Rev. Dr. Philp was chaplain.

The Chancellor congratulated the medical faculty for having enlarged the medical building at their own expense, and he was gratified to know that they were not weary in well doing, but intended to leave nothing undone to maintain the progress and good name of the University.

Dr. Herald, secretary of the faculty, reported that the most successful session in the history of the medical college had just closed. Last session there were registered 151 students; this session the number totalled 177. Queen's, he said, had been spoken of very freely as a Presbyterian institution. But her field was much wider, as was shown by the religious complexion of the medical students, of whom 59 were Presbyterians, 53 Methodist, 30 Roman Catholic, 26 Anglican, and 9 of other sects. Last fall's freshmen class numbered fifty-four, and there is every reason to believe that it will be larger next session.

Then followed the presentation of prizes. One of these was given by Dr. Horsey, M.P., Owen Sound, to the member of the graduating class who received the largest number of votes from his fellow-students for being the best as regards morals. The graduating class voted by a very large majority in favor of S. O. Eshoo, the Persian, who was presented with the prize by Principal Grant. Last session the Principal inaugurated this prize, which went to Dr. F. F. Carr-Harris.

After the laureation F. Etherington read the valedictory address, in which praise was given to the efficient staff of professors. Recommendations were made as to advisable changes in the course of study.

Rev. Dr. McComb addressed the graduates and gave them some wholesome advice. His address was adorned with humor, satire and eloquence. Prof. McComb first pointed out that the graduation ceremony was something that did not end in itself. The graduating class had ceased gaining knowledge so far as their college course was concerned, and now were going out into the world to apply what they had learned. How can success be attained? If he had an absolute answer to that question he would perhaps now be a multi-millionaire in South Africa. What is the true relation of money to success? A man, the speaker said, was justified in an ambition to gain enough money to become independent, for he would then face the world with a heart of strength. It is the dependent man who is the weakling.

The true success of life lies in forgetting self and helping those in need. To be successful, Prof. McComb said, the graduates must believe in their calling, even when things look discouraging. They must be workers too. The speaker warned them to be on guard against the danger of over-specialization, the danger of being one-sided; instead of becoming free men, being the slaves of prejudices. He warned them not to forget the spiritual and intellectual in the merely physical. If they did forget, then all their skill would fail in the diseases that lie deeper than the physical art. "Be faithful, self-denying and loyal servants of humanity," were Prof. McComb's concluding words.

Principal Grant also spoke, and was warmly applauded. He first conveyed the regrets of the Lord Bishop of Ontario at being unable to be present. The Principal then proceeded to make a confession. When he came to Kingston, seeing how meagre were the provisions for the University, he concluded that it was a mistake to have a medical faculty, and therefore did little or nothing for it. But he tried to keep an open mind,

and finally came to see that he was mistaken. Then he worked for the affiliation of the Royal Medical College to the University, and ever since the Medical College progress has been steady. Ten years ago Dr. Knight was appointed Professor of Animal Biology and Physiology, and has done noble service, as the medical valedictorian attested. The next onward step was to place Dr. W. T. Connell in the position of Professor of Pathology and Bacteriology, to which subject he should give his whole time. The third stage of progress was the extension of the building last year.

The Principal stated that the medical professors intended expending \$6,000 more for equipment, so as to make the institution one of the best in the land. It was a shame, he declared, that the faculty had been allowed to extend the college by putting their hands in their own pockets. They were worthy of support, and he intended to be the first to contribute to the equipment fund. He had seen many colleges and hospitals in Canada, the United States and Great Britain, and he was proud of the Kingston General Hospital and the Medical College.

Principal Grant referred to the Canadian soldiers who had died at Hart's River, in the Transvaal. It was a proud moment for him when he read Kitchener's despatch, which named as leader of the gallant band Lieut. Bruce Carruthers, vice-chairman of the Kingston School of Mines, who had contributed so liberally to the University, and taken such an interest in it.

"But one thing I mourn," continued the Principal, "the Canadians are there on their own account; they are not our soldiers, for they are paid by the old country. They are merely individual volunteers, and the credit is due to them individually and not to Canada. I desire to pay tribute to the heroism of those Canadians who died at Hart's river in South Africa."

The following is a list of the graduates and prize-winners :

W. W. Anon	Kingston
G. H. Bleeker	Trenton.
J. V. Connell	Spencerville

J. W. Crews	Trenton.
G. F. Dalton, B.A.	Kingston
H. E. Day, B.A.	Kingston.
S. O. Eshoo.....	Oroomiah, Persia.
J. T. Hill.....	Conway.
F. Etherington.....	Portsmouth.
H. E. Gage.....	Kingston.
D. E. Graham	Steinbach, Man.
R. E. Hughes.....	Ottawa.
L. W. Jones	Kingston
W. R. Mason	Ottawa.
F. E. Mellow	Sillsville.
J. W. Merrill, B.A.....	Ottawa.
R. G. Moore	Brockville.
W. McKechnie.....	Elmade, Que.
T. O. McLaren.....	Lancaster.
P. I. Nash	Kingston.
T. J. O'Reilly.....	Placentia, Nfd.
T. H. Orser, B.A.....	Glenvale.
W. J. Patterson	Peterboro.
J. S. Beekie	Sydney, N.S.W.
R. M. Reid	Renfrew.
A. L. Smith.....	Kingston.
C. M. Stratton, B.A.....	Napanee.
C. D. St. Remy.....	Kingston.
H. C. Windel, M.A.....	Lotus.

MEDALISTS.

Medal in Surgery—G. F. Dalton, B.A.	Kingston.
Medal in Medicine—F. E. Mellow	Sillsville.
House Surgeons—G. F. Dalton, B.A., E. Etherington and C. de St. Remy.....	All of Kingston.
Chancellor's prize of \$70—T. O. McLaren...	Lancaster.

THE CANADIAN MEDICAL GRADUATE IN LONDON.

CANADIAN students who have finished their course in Canada, and who wish to spend some time in the London hospitals, will find it most advantageous to reach London about the middle of September, as it is between the months of September and June that the greatest abundance of clinical material is to be had. However, at no period of the twelve months will the visitor have reason to complain of lack of the same. If the student purposes writing on any of the English examinations he should not go until he is able to produce certificates stating that he has spent five winter and five summer sessions in the acquirement of medical knowledge, and has attended hospital practice during his whole course. The ordinary class certificates of any Canadian University with certificates from a hospital superintendent of having attended hospital practice during the summers, together with certificates for a fifth year, as provided for by the Ontario Medical Council, will give the student his required standing.

The most convenient locality for students to take up their quarters is in the neighborhood of Russell Square, and a good plan is to arrange for room, breakfast and dinner at a suitable house in this district, and to take luncheon either at the hospital where one is studying or at a near-by restaurant.

In order to rapidly gain some knowledge of the geography of London it is well to carefully study a good hand-book such as Baedeker's. By this means in a few days a good general idea of direction and distance, which would require weeks in acquiring in any other way, may be obtained.

A student intending to try the examinations of the "Con-joint Board" in England leading to the M. R. C. S. and L.R.C.P. degrees had better spend a week or two in visiting a few of the best hospitals, and choose one where the work is best suited to his needs. He had then better stick to this hospital, carefully studying English methods of diagnosis and treatment. If he requires more work in a certain department than he can get at this hospital he can with advantage spend

some time each week in one of the hospitals devoted to the study of the special branch of work in which he is interested. If, on the other hand, he does not wish to try examination work, but prefers to divide his time among different hospitals, he can secure a ticket that will permit him to visit six or eight of the large London hospitals. The ticket is good for six months and costs about \$52. This ticket can be purchased at the Examination Hall on Victoria Embankment. Instead of this, one can procure tickets from each hospital he wishes to visit, the cost being about twenty-six dollars for three months, or thirty-five dollars for six months. Students who have only a short time to spend in London will be made welcome at most of the hospitals without paying these charges.

The following are a few descriptive notes on each of the more widely known hospitals in London :

The London General Hospital, in Whitechapel, is the most extensive in the city, and one of the largest in the world. It has 1100 beds for indoor patients, and treats about 200,000 outdoor patients annually. The supply of clinical material is unlimited, and it is thus an excellent place for independent work, although, as a rule, the staff are unable to spend as much time in explaining individual cases as in some of the smaller hospitals. One of its best departments is that for skin diseases, presided over by Dr. Stephen Mackenzie. Sir F. Treves, the anatomist and surgeon, is on its consulting staff, and Hermann and Lewers, obstetricians and gynaecologists, are on the attending staff.

St. Bartholomew's, in Smithfield, is one of the oldest, largest, and by far the wealthiest hospital in London, and is considered to be the best school of surgical instruction there. Walsham is one of the surgeons, and Lauder Brunton is on the medical staff. Its pathological museum is one of the best in Great Britain, and from the standpoint of human pathology it is superior to that of the Royal College of Surgeons, which is a museum of general pathology. A perpetual ticket is issued by St. Bartholomew's at a cost of fifteen guineas, and is good for the lifetime of its holder.

University College Hospital attracts more Canadians than any other hospital in London at the present time. It is situated on Gower street a few blocks northwest of Russell Square, and the most scientific medical work in London is done here. Its staff of physicians includes Sir Thomas Barlow, physician to the King; Roberts, Sidney Martin, who has done special research work on the kidney; Risien Russel, the nerve specialist; and Crocker, one of the best known authorities on skin diseases. On its surgical staff are Victor Horsley the brain surgeon, Godlee and Barker, who at one time devised an operation for inguinal hernia. Herbert Spencer is one of the gynaecologists.

Middlesex hospital, situated five or six blocks north of Russell Square, is another favorite with Canadians. It has a strong surgical staff, including such men as Henry Morris, the anatomist and surgeon, Pearce Gould, who is one of the best surgical teachers to be found anywhere, and Bland Sutton, the gynaecologist and surgeon, whose work on "Tumors innocent and malignant" is a standard in London.

If a student intends to try examinations I think he would do well to limit himself to a study of these above mentioned schools and choose one of them, not that they are so vastly superior to other hospitals, but rather on account of their location, the high standard of work done in them, and the fact that other Canadians are almost sure to be found at them. This, of course, should not prevent his attendance on any of the special hospitals whose work he requires.

Another of the general hospitals is Charing Cross, situated in the Strand, not far from Trafalgar Square. On its medical staff is Mitchell Bruce, whose clinical lectures are thorough, not only from a medical but also from a literary point of view.

St. Thomas' hospital is built on the modern pavilion plan. It is situated on the south side of the Thames, just opposite the British Parliament buildings. It is one of the finest hospital buildings in Europe and the work done there is of a good quality.

Guy's hospital is also on the south side of the Thames,

just a short distance from the famous London bridge. It has a strong staff in all departments, but is seldom attended by Canadians, as it is situated in a part of the city not often frequented by them.

King's College hospital, one block south of Lincoln's Inn Fields, is one of the smaller teaching hospitals, having accommodation for about 250 indoor patients. On its staff are several men whose names have become familiar to Canadians. On its surgical staff are Lord Lister (consultant), Rose, Carless and Watson-Cheyne. Burney Yeo is on the medical staff, Playfair is its obstetrician, and Haliburton is professor of physiology here.

A hospital that is of peculiar interest to medical graduates is the Post Graduate hospital in Chenies street, about two blocks north of Russell Square. It was founded by Jonathan Hutchinson and is simply a teaching hospital. Patients suitable for the purpose are brought here from all parts of the city and their diseases are discussed by the members of the clinic. Only medical graduates are allowed to attend.

The above list includes all the more important general hospitals. Besides these there are numerous special hospitals. I will briefly mention a few of them.

In diseases of the eye the best work is done at the Royal London Ophthalmic, commonly known as Moorfield's hospital. It has a very large outdoor clinic conducted by the best men in London, and many who have studied in various places on the continent have told me that Moorfield's is unexcelled by any institution in Europe.

In ear, throat and nose work the hospitals that do the best work are the Central London on Gray's Inn Road, and Golden Square hospital, founded by the late Sir Morrel Mackenzie.

St. John's hospital for skin diseases, in Leicester Square, is a good place to see cases, but my own experience is that the work done in the skin departments of either London General hospital or University College hospital is more thoroughly done, not that the specialists in St. John's are not as well qualified, but simply that it is not what is known as a teaching

hospital. Some instruction is given, but details are omitted. The clinics are free.

The National hospital for nervous and epileptic cases is a modern and well equipped hospital. It is situated in Queen's Square, one block south and one east of Russell Square. On its staff are Gowers, Hughlings Jackson, who first described Jacksonian epilepsy, and Risien Russell. The outdoor clinics held on four afternoons of the week are free and the instruction is good.

The conditions required, and the nature of the examinations held, by the Royal Colleges of Physicians and Surgeons, are subjects regarding which many questions have been asked.

Previous to 1892 or thereabouts the Royal College of Surgeons of England and the Royal College of Physicians of London held separate examinations and each granted its own diploma, which enabled the holder to practise in any part of the British Empire. For the past nine or ten years another arrangement has been in operation. A conjoint board of examiners was formed and now diplomas are not granted separately, but both diplomas must be won before either is granted, and it requires both to license a person to practise.

In the earlier part of this letter I referred to the requirements in medical education. It is not enough to produce diplomas stating that the holder has graduated. The original class tickets properly certified must be handed in to the secretary of the conjoint board, and a certificate of date of birth must accompany these. The student has then to get a government vaccination certificate from one of the public vaccinators in London stating that he is qualified to vaccinate. In order to get this it may be necessary to attend a course of six demonstrations, although some public vaccinators make an exception in the case of Canadians and give the certificate without requiring attendance. The fee is about 30s. : \$7.50.

These directions are sufficient to guide the student until he has his interview with the secretary. If full information is required it can be obtained by writing to Mr. F. G. Hallett, secretary of the conjoint board, Examination Hall, Victoria

Embankment, London, W.C. I rather anticipated the secretary's instructions in the matter of the vaccination certificate. He will tell the student where they may be obtained.

The examinations are held four times a year in January, April, July and October. Canadian graduates do not have to try the primary or intermediate, but only the final examination. The final consists of three parts: medicine, surgery and midwifery. The latter may be tried at the end of the fourth year. The three groups may be tried at one time or one group at a time at the end of the fifth year.

The examination in midwifery, including obstetrics and gynæcology, consists of two parts, a written examination and a twenty minute oral examination including the use of instruments. For this examination it is better to read English text-books only, as the English are conservative in these branches. Text books such as Galabin or Playfair on Obstetrics, and Lewers on Gynæcology, will be found to answer the requirements.

Medicine consists of a written examination (two papers), a clinical examination which consists in examination and diagnosis of cases for about half an hour and the writing out in detail of the treatment for a disease mentioned by the examiner, for which ten minutes is allowed; an oral examination on general medicine, medical pathology, gross and microscopical and lasting twenty minutes.

Medicine includes the following subjects: Practice of Medicine, Clinical Medicine, Therapeutics, Jurisprudence and Toxicology, Sanitary Science, Medical Anatomy, Pathology and Bacteriology.

A question on Therapeutics, Jurisprudence, Sanitary Science and Bacteriology on one of the papers is almost all the attention given to these subjects. The work done at a Canadian Medical College more than covers the ground. The only points that may require looking up are the English legal procedures in Jurisprudence. In the clinical examination typical cases of any of the diseases of the skin or nervous system may be shown.

Surgery consists of a written examination; a clinic lasting about half an hour in which the student may have to examine only two, but often six cases; a practical examination in surgical anatomy, operative surgery and use of instruments lasting twenty minutes, and the microscopical identification and description of two pathological specimens for which ten minutes is allowed, and an oral on surgical pathology and general surgery lasting twenty minutes.

Surgery includes practice of surgery, clinical surgery, descriptive and surgical anatomy, surgical pathology and bacteriology. If I had to name two subjects that are pre-eminent in these examinations I would unhesitatingly name the subjects of Anatomy and Pathology. These are two subjects that every examiner knows thoroughly, and when he lacks a good question on the subject in which he is questioning the student, immediately turns to the anatomical or pathological side of the case. There is a question on anatomy in nearly every paper.

I will conclude this letter by a reference to the cost of living and studying in London for a term of six months.

The first item to be considered is passage to London and return. This will average \$100. It can be made more cheaply, and very easily be made at a much higher rate. Board and general household expenses, bus fares, etc., will make the actual living expense about \$8.00 per week or \$200 for six months. A hospital ticket will cost to begin with about \$50, and incidental expenses will add \$50 more, so that it is safe to count on an expenditure of \$400. If the student is going to try the examination he will have to add the fees, which are 20 guineas, about \$103, which is paid before trying the examinations. It makes no difference in the fee whether they are all tried at one time or tried separately. He must also add \$103 for the diplomas when successful. This makes a total of \$615 in round numbers. It is not claimed that the amount is accurate, but it is a safe amount to count on. In case of failure on examinations, supplementary examinations cost about \$50.

In closing this article I will simply add the statement that

no pretence is made to have completely covered the ground. The merest outline has been given. The writer has, however, included a number of facts which he found useful himself, and which, perhaps, may be of some assistance to others.

A. R. B. WILLIAMSON.

MONOCULAR OPHTHALMOPLÉGIA EXTERNA.

THESE cases of monocular ophthalmoplegia externa are so rare that the following report will be of interest.

Mrs. R., aet. 48, seen with Dr. R. Hanley, Feb. 22, 1902. Personal history negative. For the past three weeks has had severe neuralgic pain in the left frontal and parietal region. Had diplopia for one or two days of this time. Her daughter says that the eye turned toward the nose for a few days two weeks ago. No further history to be had. Examination of the left eye shows ptosis almost complete, the slight movement of the lid being due probably to the action of the orbicularis. The eye is fixed immovably in the median line. The pupil is normal and reacts to light and to accommodation. The fundus is normal, but no diplopia can be elicited. Very slight proptosis. Prescribed fifteen grain doses of potassium iodide, t.i.d. Re-examined March 12. The ptosis is less, but otherwise the eye is the same. There has been pain at intervals. With an effort the lid is raised about one-half.

The lesion here is without doubt in the nuclei of the third, fourth and sixth nerves, which lie along the floor of the fourth ventricle below the aqueduct of Sylvius. The arrangement of the nuclei here is such that those of the sphincter pupillæ and ciliary muscle lie farthest forward and hence frequently remain exempt from processes which destroy the more posteriorly situated nuclei of the other ocular muscles. For this reason ophthalmoplegia externa can only be of central (nuclear) origin.

The lesion may be degeneration, hæmorrhage, softening or inflammation. From the amount of pain present in the above case the lesion is probably inflammatory. If the statement of the daughter is correct, that convergent strabismus was present early, and was noticed before the ptosis, it would seem that the lesion began in the posterior nuclei first and extended by continuity forward. Fuchs thinks that the extension is usually from before backward. The pain may be accounted for by the proximity of the nucleus of the fifth nerve to that of the fourth. Another point of great interest is the evidence furnished by such a case of the division of the oculo-motor nucleus into a number of partial nuclei or of separate segments, each one of which corresponds to one of the muscles innervated by the oculo-motor nerve. In what order the individual partial nuclei follow each other is not absolutely known. It is established, however, that the several groups of cells are divided into large celled clumps which probably supply the extrinsic muscles, and clumps of smaller cells extending farther forward towards the third ventricle, and these give rise to fibres for the intrinsic muscles of the eyeball. In the present lesion the small cells have escaped, probably on account of their power of resistance.

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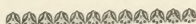
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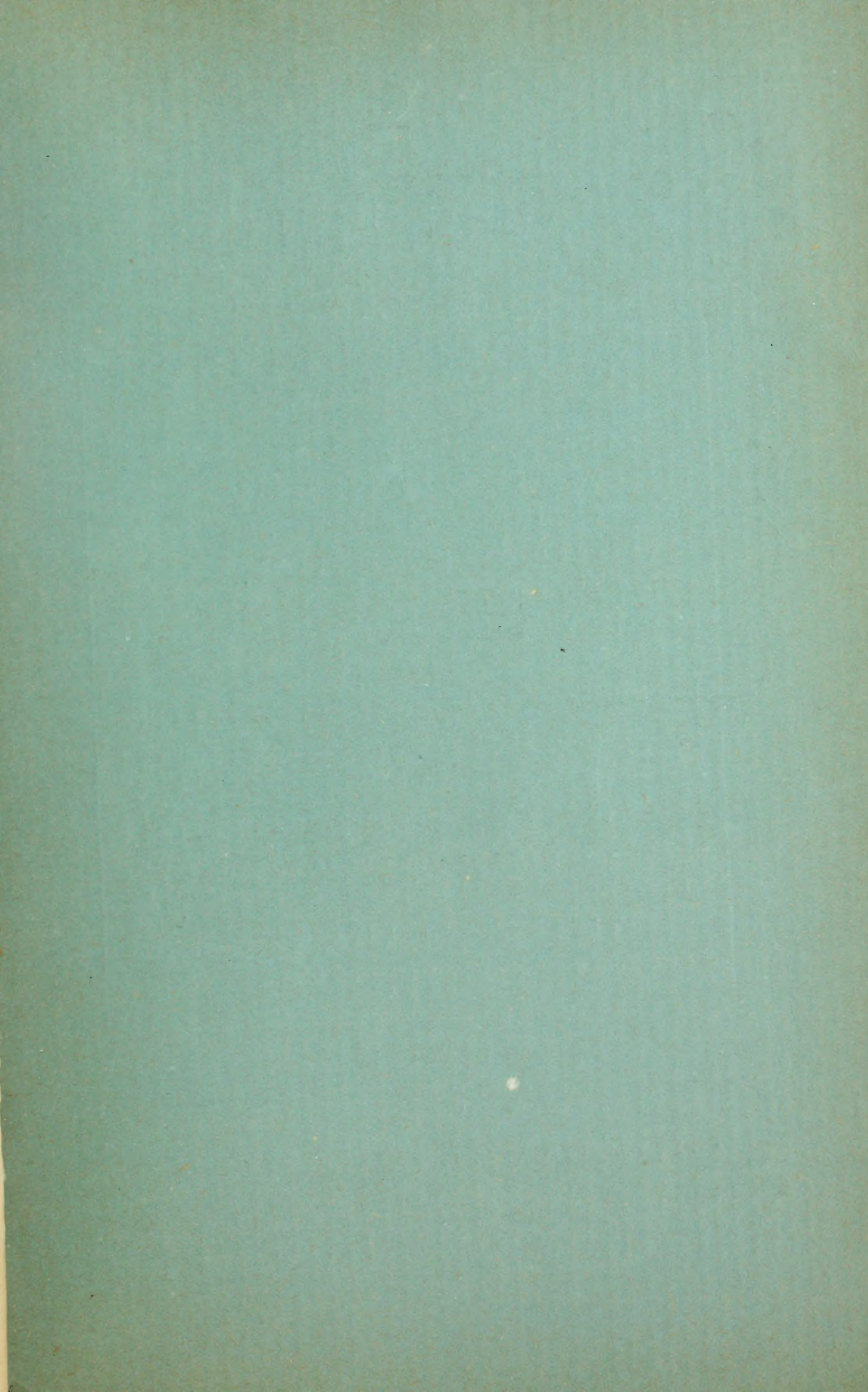
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